

**REFRIGERANT CYCLE WITH OPERATING RANGE EXTENSION****ABSTRACT OF THE DISCLOSURE**

A refrigerant cycle is provided with a control that monitors system conditions such as current, voltage or temperature at a compressor motor or refrigerant state conditions at compressor ports. A protection switch on the motor is operable to stop operation of the compressor should a system condition exceed a predetermined maximum. The control monitors a system condition, and determines that the system condition indicates the protection switch may be actuated as the condition is moving toward the predetermined limit. Under such conditions, the control moves the compressor to a less loaded mode of operation such that it is less likely that the protection switch will actuate.